

## IOWA DEPARTMENT OF TRANSPORTATION

**To Office:** Specification Committee

**Date:** April 4, 2016

**Attention:**

**Ref. No.:** 305

**From:** Thomas L. Reis, P.E.

**Office:** Specifications

**Subject:** Agenda for April 14, 2016, Specification Committee Meeting

The Specification Committee will meet on Thursday, April 14, 2016, at 9:00 a.m. in the NW Wing, 1<sup>st</sup> Floor Conference Room.

The agenda is as follows:

**1. Article 2102.04, A, 8, Contractor Furnished Select Treatment.**

The Office of Design requests to clarify that the quantity for contractor furnished select treatment does not include shrinkage.

**2. Article 2304.02, A, PCC Option.**

The Office of Design requests to add specifications for long term detour pavement.

**3. Section 2401, Removal of Existing Structures.**

The Office of Construction and Materials requests to update the DNR requirements for removal of an existing bridge.

**4. Article 2513.03, A, 2, b, 2, Concrete Barrier.**

The Office of Construction and Materials requests to update the specification due to Materials I.M. changes.

**5. Article 2602.03, M, Mobilizations, Emergency Erosion Control.**

The Office of Design requests to identify which projects should include Mobilizations, Emergency Erosion Control.

**6. Section 4108, Supplementary Cementitious Materials.**

The Office of Construction and Materials requests to add specifications for natural pozzolans, a new supplementary cementitious material.

**7. Article 4160.01, General Requirements.**

**Article 4161.03, B, 6, Handling Treated Products.**

**Article 4161.03, B, 7, b, Product Marking.**

**Article 4164.01, A, General Requirements.**

The Office of Construction and Materials requests to update the treated wood specifications to meet current AWPA standards.

**8. Article 2116.02, A, 1, b, Full Depth Reclamation.**

**Article 2122.02, A, Hot Mix Asphalt Mixture (1,000,000 ESAL Base Mixture).**

**Article 2213.02, A, 1, Asphalt Base Widening.**

**Section 2303, Flexible Pavement.**

**Article 2304.02, B, HMA Option.**

**Article 2310.02, B, Hot Mix Asphalt Stress Relief Course.**

**Article 2318.02, A, 2, Cold In-Place Recycled Pavement.**

**Article 2511.02, B, Hot Mix Asphalt.**

**Article 2517.02, B, HMA Paving Projects.**

**Article 2529.02, A, Hot Mix Asphalt Mixture.**

**Article 2530.02, A, Hot Mix Asphalt Patching Material.**

**Article 2540.02, Materials.**

**Article 2543.02, A, Transverse Joint Repair for HMA Pavements.**

**Section 4137, Asphalt Binder.**

The Office of Construction and Materials requests to update asphalt specifications due to the adoption of AASHTO M 332.

**9. DS-15024, Hot Mix Asphalt Interlayer.**

The Office of Construction and Materials requests revisions to the Developmental Specifications for Hot Mix Asphalt Interlayer and to make the DS into an SS.

**10. DS-15037, High Performance Thin Lift Overlay.**

The Office of Construction and Materials requests revisions to the Developmental Specifications for High Performance Thin Lift Overlay.

**11. Article 1107.06, B, Buy America.**

The Office of Construction and Materials requests to address changes to Buy America provisions due to a recent court decision.

Form 510130 (08-15)



**SPECIFICATION REVISION SUBMITTAL FORM**

<b>Submitted by:</b> Brian Smith		<b>Office:</b> Design	<b>Item</b> 1
<b>Submittal Date:</b> 3/22/2016		<b>Proposed Effective Date:</b> 10/18/2016	
<b>Article No.:</b> 2102.04, A, 8		<b>Other:</b>	
<b>Title:</b> Roadway and Borrow Excavation			
<b>Specification Committee Action:</b>			
<b>Deferred:</b>	<b>Not Approved:</b>	<b>Approved Date:</b>	<b>Effective Date:</b>
<b>Specification Committee Approved Text:</b>			
<b>Comments:</b>			
<b>Specification Section Recommended Text:</b>			
2102.04, A, 8, Contractor Furnished Select Treatment.			
Add as the second sentence: Shrinkage will not be included in the quantity.			
<b>Comments:</b>			
<b>Member's Requested Change:</b> (Do not use 'Track Changes', or 'Mark-Up'. Use <del>Strikeout</del> and <u>Highlight</u> .)			
2102.04, A, 8, Contractor Furnished Select Treatment.			
Add as the second sentence:			
8. Contractor Furnished Select Treatment.			
Shrinkage will not be included in the quantity.			
<b>Reason for Revision:</b> Clarify shrinkage is not included in contractor furnished select treatment quantities.			
<b>New Bid Item Required (X one)</b>	<b>Yes</b>	<b>No</b> X	
<b>Bid Item Modification Required (X one)</b>	<b>Yes</b>	<b>No</b> X	
<b>Bid Item Obsolescence Required (X one)</b>	<b>Yes</b>	<b>No</b> X	
<b>Comments:</b>			
<b>County or City Comments:</b>			
<b>Industry Comments:</b>			

Form 510130 (08-15)



**SPECIFICATION REVISION SUBMITTAL FORM**

<b>Submitted by:</b> Brian Smith		<b>Office:</b> Design	<b>Item 2</b>
<b>Submittal Date:</b> 2/22/2016		<b>Proposed Effective Date:</b> 10/18/2016	
<b>Article No.:</b> 2304.02, A <b>Title:</b> PCC Option		<b>Other:</b>	
<b>Specification Committee Action:</b>			
<b>Deferred:</b>	<b>Not Approved:</b>	<b>Approved Date:</b>	<b>Effective Date:</b>
<b>Specification Committee Approved Text:</b>			
<b>Comments:</b>			
<b>Specification Section Recommended Text:</b> 2304.02, A, PCC Option.  Add the Article: 3. For detour pavement left in place, meet requirements of Section 2301 for Class C PCC Pavement. Use Class 3 durability aggregate, or better, as defined in Article 4115.04.			
<b>Comments:</b>			
<b>Member's Requested Change:</b> (Do not use 'Track Changes', or 'Mark-Up'. Use <del>Strikeout</del> and Highlight.) 2304.02, A, PCC Option. Add as a new article: 3. For detour pavement left in place, meet the requirements of Section 2301 for Class C PCC Pavement. Use Class 3 durability aggregate, or better, as defined in Article 4115.04.			
<b>Reason for Revision:</b> Add specifications for detour pavement left in place. This is pavement that is intended to be left in place longer than normal detour pavement.			
<b>New Bid Item Required (X one)</b>	<b>Yes</b>	<b>No</b> X	
<b>Bid Item Modification Required (X one)</b>	<b>Yes</b>	<b>No</b> X	
<b>Bid Item Obsolescence Required (X one)</b>	<b>Yes</b>	<b>No</b> X	
<b>Comments:</b>			
<b>County or City Comments:</b>			
<b>Industry Comments:</b>			

**SPECIFICATION REVISION SUBMITTAL FORM**

<b>Submitted by:</b> Greg Mulder		<b>Office:</b> Construction & Materials	<b>Item 3</b>
<b>Submittal Date:</b> March 28, 2016		<b>Proposed Effective Date:</b> October 2016 GS	
<b>Section No.:</b> 2401 <b>Title:</b> Removal of Existing Structures		<b>Other:</b>	
<b>Specification Committee Action:</b>			
<b>Deferred:</b>	<b>Not Approved:</b>	<b>Approved Date:</b>	<b>Effective Date:</b>
<b>Specification Committee Approved Text:</b>			
<b>Comments:</b>			
<b>Specification Section Recommended Text:</b> <b>2401.03, A, Notification for Complete Removal of Bridges.</b>  <b>Replace the Article:</b> <ol style="list-style-type: none"> <li>1. Notify the Iowa DNR <del>by mail and the Engineer</del>, with the "Asbestos Notification of Bridge Demolition and Renovation" form, no less than 10 business days prior to the start of bridge demolition. Iowa DNR form is available at <a href="http://www.iowadnr.gov/Environmental-Protection/Air-Quality/Asbestos-Training-Fires">http://www.iowadnr.gov/Environmental-Protection/Air-Quality/Asbestos-Training-Fires</a>. Provide copy of submitted form to the Engineer.</li> <li>2. If unable to begin work on the original intended start date, notify the Iowa DNR and the Engineer, by sending a revised "Asbestos Notification of Bridge Demolition and Renovation" form, of the new intended start date. Provide notification of the inability to commence work on the intended start date no later than 1 business day prior to the original intended start date. Failure to notify the Engineer of a change in start date 1 business day prior to the original intended start date will result in the need for a new 10 business day notification to the Iowa DNR and the Engineer.</li> <li>3. The Contracting Authority has inspected the existing bridge for asbestos. Unless otherwise indicated in the contract documents, no asbestos was found, or it has been removed prior to the letting. The Contractor may use this information to complete the "Asbestos Notification of Bridge Demolition and Renovation" form.</li> </ol> <b>2401.05, Basis of Payment.</b>  <b>Add the Article:</b> <ol style="list-style-type: none"> <li>C. Payment for Removal of Existing Bridge is full compensation for submittal of Asbestos Notification of Bridge Demolition form(s) and associated fees to Iowa DNR, removal of bridge according to contract documents, and transporting and disposal of materials.</li> </ol>			
<b>Comments:</b>			
<b>Member's Requested Change: (Do not use 'Track Changes', or 'Mark-Up'. Use <del>Strikeout</del> and Highlight.)</b> <b>2401.03 CONSTRUCTION.</b>  <b>A. Notification for Complete Removal of Bridges.</b> <ol style="list-style-type: none"> <li>1. Notify the Iowa DNR <del>by mail and the Engineer</del>, with the "Asbestos Notification of Bridge Demolition and Renovation" form, no less than 10 business days prior to the start of bridge demolition. The Iowa DNR form is available at <a href="http://www.iowadnr.gov/Environmental-Protection/Air-Quality/Asbestos-Training-Fires">http://www.iowadnr.gov/Environmental-Protection/Air-Quality/Asbestos-Training-Fires</a>. Provide copy of submitted form to the Engineer.</li> </ol>			

2. If unable to begin work on the original intended start date, notify the Iowa DNR and the Engineer, by sending a revised "Asbestos Notification of Bridge Demolition and Renovation" form, of the new intended start date. Provide notification of the inability to commence work on the intended start date no later than 1 business day prior to the original intended start date. Failure to notify the Engineer of a change in start date 1 business day prior to the original intended start date will result in the need for a new 10 business day notification to the Iowa DNR and the Engineer.
3. The Contracting Authority has inspected the existing bridge for asbestos. Unless otherwise indicated in the contract documents, no asbestos was found, or it has been removed prior to the letting. The Contractor may use this information to complete the "Asbestos Notification of Bridge Demolition and Renovation" "Notification of Demolition" form.

**2401.04 METHOD OF MEASUREMENT.**

Lump sum. No method of measurement.

**2401.05 BASIS OF PAYMENT.**

- A. When the contract includes an item for Removal of Existing Structures, payment will be the Lump Sum contract price. When provisions in the contract documents do not cover payment for removal of a structure, including encased culvert pipe, footings, or other unforeseen obstacles to be removed, payment for their removal will include placement of backfill material made necessary by their removal. This payment will be as provided in [Article 1109.03, B.](#)
- B. The payment for removal of an existing structure is full compensation for:
  - Furnishing all material, equipment, and labor and for performance of all work necessary for removal of the old structure from the project, and
  - Placement of backfill material made necessary by these operations, and
  - If the existing structure will become the property of the Contracting Authority, payment for proper storage, salvage, and delivery of the structure will be according to [Section 2555.](#)
- C. Payment for "Removal of Existing Bridge" is full compensation for submittal of Asbestos Notification of Bridge Demolition form(s) and associated fees to Iowa DNR, removal of bridge according to contract documents, and transporting and disposal of materials.

**Reason for Revision:** Iowa DNR revised the Notification of Bridge Demolition form and imposed fees effective Jan 15, 2016.

<b>New Bid Item Required (X one)</b>	<b>Yes</b>	<b>No</b> X
<b>Bid Item Modification Required (X one)</b>	<b>Yes</b>	<b>No</b> X
<b>Bid Item Obsolescence Required (X one)</b>	<b>Yes</b>	<b>No</b> X
<b>Comments:</b>		
<b>County or City Comments:</b>		
<b>Industry Comments:</b>		

Form 510130 (08-15)



**SPECIFICATION REVISION SUBMITTAL FORM**

<b>Submitted by:</b> Greg Mulder		<b>Office:</b> Construction & Materials	<b>Item 4</b>
<b>Submittal Date:</b> February 2016		<b>Proposed Effective Date:</b> October 2016	
<b>Article No.:</b> 2513.03, A, 2, b, 2) <b>Title:</b> Aggregates for Class BR (Concrete Barrier)		<b>Other:</b>	
<b>Specification Committee Action:</b>			
<b>Deferred:</b>	<b>Not Approved:</b>	<b>Approved Date:</b>	<b>Effective Date:</b>
<b>Specification Committee Approved Text:</b>			
<b>Comments:</b>			
<b>Specification Section Recommended Text:</b> <b>2513.03, A, 2, b, 2).</b>  <b>Replace the Article:</b> <b>Aggregates for Class BR.</b> Use a well graded combination of aggregates complying with Materials I.M. 532 <del>in Zone II-A or II-B.</del> Meet requirements in Division 41 for each individual aggregate used.			
<b>Comments:</b>			
<b>Member's Requested Change:</b> ( <b>Do not use 'Track Changes', or 'Mark-Up'. Use Strikeout and Highlight.</b> ) 3) <b>Aggregates for Class BR.</b> Use a well graded combination of aggregates complying with <a href="#">Materials I.M. 532</a> in Zone II- <del>A or II-B.</del> Meet requirements in <a href="#">Division 41</a> for each individual aggregate used.			
<b>Reason for Revision:</b> The various zones (II-A to II-D) in IM 532 will be eliminated with the latest QMC DS revision. Since the various zones will be eliminated, this change is needed to reflect the changes in IM 532.			
<b>New Bid Item Required (X one)</b>	<b>Yes</b>	<b>No</b> X	
<b>Bid Item Modification Required (X one)</b>	<b>Yes</b>	<b>No</b> X	
<b>Bid Item Obsolescence Required (X one)</b>	<b>Yes</b>	<b>No</b> X	
<b>Comments:</b>			
<b>County or City Comments:</b>			
<b>Industry Comments:</b>			

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**SPECIFICATION REVISION SUBMITTAL FORM**

<b>Submitted by:</b> Brian Smith		<b>Office:</b> Design	<b>Item</b> 5
<b>Submittal Date:</b> 3/22/2016		<b>Proposed Effective Date:</b> 10/18/2016	
<b>Article No.:</b> 2602.03, M <b>Title:</b> Mobilizations, Emergency Erosion Control		<b>Other:</b>	
<b>Specification Committee Action:</b>			
<b>Deferred:</b>	<b>Not Approved:</b>	<b>Approved Date:</b>	<b>Effective Date:</b>
<b>Specification Committee Approved Text:</b>			
<b>Comments:</b>			
<b>Specification Section Recommended Text:</b> <b>2602.03, M, Mobilizations, Emergency Erosion Control.</b>  <b>Add</b> as the first sentence: Mobilizations, Emergency Erosion Control, applies to projects not identified as erosion control or landscaping and containing a Storm Water Pollution Prevention Plan (SWPPP).			
<b>Comments:</b>			
<b>Member's Requested Change:</b> (Do not use 'Track Changes', or 'Mark-Up'. Use <del>Strikeout</del> and Highlight.) <b>2602.03, M, Mobilizations, Emergency Erosion Control.</b> <b>Add</b> as first sentence to the first paragraph: Mobilizations, Emergency Erosion Control, applies to projects not identified as erosion control or landscaping and containing a Storm Water Pollution Prevention Plan (SWPPP).			
<b>Reason for Revision:</b> Projects containing a SWPPP should contain a bid item for Mobilizations, Emergency Erosion Control in addition to a bid item for Mobilizations, Erosion Control.			
<b>New Bid Item Required (X one)</b>	<b>Yes</b>	<b>No</b> X	
<b>Bid Item Modification Required (X one)</b>	<b>Yes</b>	<b>No</b> X	
<b>Bid Item Obsolescence Required (X one)</b>	<b>Yes</b>	<b>No</b> X	
<b>Comments:</b>			
<b>County or City Comments:</b>			
<b>Industry Comments:</b>			



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## SPECIFICATION REVISION SUBMITTAL FORM

<b>Submitted by:</b> Greg Mulder		<b>Office:</b> Construction & Materials	<b>Item 6</b>
<b>Submittal Date:</b> March 30, 2016		<b>Proposed Effective Date:</b> October 2016	
<b>Article No.:</b> 4108		<b>Other:</b>	
<b>Title:</b> Supplementary Cementitious Materials			
<b>Specification Committee Action:</b>			
<b>Deferred:</b>	<b>Not Approved:</b>	<b>Approved Date:</b>	<b>Effective Date:</b>
<b>Specification Committee Approved Text:</b>			
<b>Comments:</b>			
<b>Specification Section Recommended Text:</b> <b>4108.01, A.</b> <p><b>Replace</b> the first sentence:          Comply with AASHTO M 295, either Class N, Class F, or Class C, except the value of available alkalis shall not exceed 1.50% as determined by Materials I.M. 491.17.</p> <b>4108.01, D.</b> <p><b>Replace</b> the Article:          Inspection and acceptance of fly ash and natural pozzolans will be according to Materials I.M. 491.17.</p>			
<b>Comments:</b>			
<b>Member's Requested Change:</b> (Do not use 'Track Changes', or 'Mark-Up'. Use <del>Strikeout</del> and <u>Highlight</u> .) <b>4108.01 FLY ASH AND NATURAL POZZOLANS.</b> <p><b>A.</b> Comply with AASHTO M 295, either <u>Class N</u>, Class F or Class C, except the value of available alkalis is not to exceed 1.50% as determined by Materials I.M. 491.17. Sources with fly ash between 1.5% and 2.5% available alkalis may be approved based on satisfactory results of the mortar bar expansion test specified in Materials I.M. 491.17. For Class C fly ash, the pozzolanic activity test with lime will not be required.</p> <p><b>B.</b> When Class F is required, a Class C fly ash with minimum total oxides (<math>\text{SiO}_2 + \text{Al}_2\text{O}_3 + \text{Fe}_2\text{O}_3</math>) of 66% and minimum <math>\text{SiO}_2</math> of 38% may be used.</p> <p><b>C.</b> Approval of the source of fly ash will be required. This is to be based on fly ash produced when the power plant is using specific materials, equipment, and processes. Any change in materials, equipment, and processes voids the source approval, and a new approval of the source will be required.</p> <p><b>D.</b> Inspection and acceptance of fly ash and natural pozzolans will be according to Materials I.M. 491.17.</p>			
<b>Reason for Revision:</b> A new source, produced with natural pozzolans, is being developed by an Iowa company. The natural pozzolan can be used to reduce permeability and increase durability for HPC bridges and other concrete items.			
<b>New Bid Item Required (X one)</b>		<b>Yes</b>	<b>No</b> x

<b>Bid Item Modification Required (X one)</b>	<b>Yes</b>	<b>No</b> x
<b>Bid Item Obsolescence Required (X one)</b>	<b>Yes</b>	<b>No</b> x
<b>Comments:</b>		
<b>County or City Comments:</b>		
<b>Industry Comments:</b>		

Form 510130 (08-15)



**SPECIFICATION REVISION SUBMITTAL FORM**

<b>Submitted by:</b> Greg Mulder		<b>Office:</b> Construction and Materials	<b>Item 7</b>
<b>Submittal Date:</b> February 25, 2016		<b>Proposed Effective Date:</b>	
<b>Article No.:</b> 4160.01 <b>Title:</b> General Requirements <b>Article No.:</b> 4161.03, B, 6 <b>Title:</b> Handling Treated Products <b>Article No.:</b> 4161.03, B, 7, b <b>Title:</b> Product Marking <b>Article No.:</b> 4164.01, A <b>Title:</b> General Requirements		<b>Other:</b>	
<b>Specification Committee Action:</b>			
<b>Deferred:</b>	<b>Not Approved:</b>	<b>Approved Date:</b>	<b>Effective Date:</b>
<b>Specification Committee Approved Text:</b>			
<b>Comments:</b>			
<b>Specification Section Recommended Text:</b> <b>4160.01, General Requirements.</b>  <b>Replace the Articles:</b> <b>B. Pentachlorophenol.</b> Meet the requirements of AASHTO M 133 (AWPA <del>P4</del> P35). Ensure petroleum solvent meets the requirements of AWPA <del>P9</del> HSA for Hydrocarbon Solvent Type A.  <b>C. Copper Naphthenate.</b> Meet the requirements of AASHTO M 133 (AWPA <del>P8</del> P36). Ensure petroleum solvent meets the requirements of AWPA <del>P9</del> HSA for Hydrocarbon solvent Type A.  <b>D. Ammoniacal Copper Zinc Arsenate (ACZA).</b> Meet the requirements of AASHTO M 133 (AWPA <del>P5</del> P22).  <b>E. Chromated Copper Arsenate (CCA).</b> Meet the requirements of AASHTO M 133 (AWPA <del>P5</del> P23), Type A, Type B, or Type C.  <b>4161.03, B, 6, Handling Treated Products.</b>  <b>Add to the end of the Article:</b> End cuts, drilled holes, or other fabrication after treatment, and damage/injuries require field treatment and shall be treated with preservatives as specified in AWPA M4.  <b>4161.03, B, 7, b.</b>  <b>Replace the first sentence:</b> Ensure all treated wood material that requires a grade, with the exception of 45 inch Terminal Posts <sup>1</sup> , displays a quality grade mark of an accredited grade monitoring and inspection agency approved under the American Lumber Standards Committee (ALSC).  <b>4164.01, A.</b>			

<p><b>Replace</b> the second sentence:          For sawed wood posts and wood sign posts, Ensure a straight line from the centers of the ends of a spot does not deviate from the longitudinal axis of the post at any point by more than 0.5% of the length of the post.</p>		
<p><b>Comments:</b></p>		
<p><b>Member's Requested Change:</b> (Do not use 'Track Changes', or 'Mark-Up'. Use <del>Strikeout</del> and Highlight.)</p>		
<p><b>4160.01, General Requirements.</b></p>		
<p><b>Replace</b> Articles B - D:</p>		
<p><b>B. Pentachlorophenol.</b>          Meet the requirements of AASHTO M 133 (AWPA <del>P4</del> P35). Ensure petroleum solvent meets the requirements of AWPA <del>P9</del> HSA for Hydrocarbon Solvent Type A.</p>		
<p><b>C. Copper Naphthenate.</b>          Meet the requirements of AASHTO M 133 (AWPA <del>P8</del> P36). Ensure petroleum solvent meets the requirements of AWPA <del>P9</del> HSA for Hydrocarbon solvent Type A.</p>		
<p><b>D. Ammoniacal Copper Zinc Arsenate (ACZA).</b>          Meet the requirements of AASHTO M 133 (AWPA <del>P5</del> P22).</p>		
<p><b>E. Chromated Copper Arsenate (CCA).</b>          Meet the requirements of AASHTO M 133 (AWPA <del>P5</del> P23), Type A, Type B, or Type C.</p>		
<p><b>4161.03, B, 6, Handling Treated Products.</b></p>		
<p><b>Add</b> to the end of the Article:          All end cuts, drilled holes, other fabrication after treatment, and damage/injuries require field treatment and shall be treated with preservatives as specified in AWPA M4.</p>		
<p><b>4161.03, B, 7, b.</b></p>		
<p><b>Replace</b> the first sentence:          Ensure all treated wood material that requires a grade, with the exception of 45 inch Terminal Posts<sup>1</sup>, displays a quality grade mark of an accredited grade monitoring and inspection agency approved under the American Lumber Standards Committee (ALSC).</p>		
<p><b>4164.01, A.</b></p>		
<p><b>Replace</b> the second sentence:          For sawed wood posts and wood sign posts, Ensure a straight line from the centers of the ends of a spot does not deviate from the longitudinal axis of the post at any point by more than 0.5% of the length of the post.</p>		
<p><b>Reason for Revision:</b> The current specification of wood treatment is inconsistent with the 2014 American Wood Protection Association (AWPA) Standards.</p>		
<b>New Bid Item Required (X one)</b>	<b>Yes</b>	<b>No</b> X
<b>Bid Item Modification Required (X one)</b>	<b>Yes</b>	<b>No</b> X
<b>Bid Item Obsolescence Required (X one)</b>	<b>Yes</b>	<b>No</b> X
<p><b>Comments:</b></p>		
<p><b>County or City Comments:</b></p>		
<p><b>Industry Comments:</b> Industry has reviewed and concurred the proposed revision.</p>		

Form 510130 (08-15)

**SPECIFICATION REVISION SUBMITTAL FORM**

<b>Submitted by:</b> Greg Mulder		<b>Office:</b> Construction and Materials	<b>Item 8</b>
<b>Submittal Date:</b> 3/28/2016		<b>Proposed Effective Date:</b> October 2016	
<b>Article No.:</b> 2116.02, A, 1, b <b>Title:</b> Full Depth Reclamation <b>Article No.:</b> 2122.02, A <b>Title:</b> HMA Mixture (1,000,000 ESAL Base Mixture) <b>Article No.:</b> 2213.02, A, 1 <b>Title:</b> Asphalt Base Widening <b>Section No.:</b> 2303 <b>Title:</b> Flexible Pavement <b>Article No.:</b> 2304.02, B <b>Title:</b> HMA Option <b>Article No.:</b> 2310.02, B <b>Title:</b> HMA Stress Relief Course <b>Article No.:</b> 2318.02, A, 2 <b>Title:</b> Cold In-Place Recycled Pavement <b>Article No.:</b> 2511.02, B <b>Title:</b> Hot Mix Asphalt <b>Article No.:</b> 2517.02, B <b>Title:</b> HMA Paving Projects <b>Article No.:</b> 2529.02, A <b>Title:</b> HMA Mixture <b>Article No.:</b> 2530.02, A <b>Title:</b> HMA Patching Material <b>Article No.:</b> 2540.02 <b>Title:</b> Materials <b>Article No.:</b> 2543.02, A <b>Title:</b> Transverse Joint Repair for HMA Pavements <b>Section No.:</b> 4137 <b>Title:</b> Asphalt Binder		<b>Other:</b>	
<b>Specification Committee Action:</b>			
<b>Deferred:</b>	<b>Not Approved:</b>	<b>Approved Date:</b>	<b>Effective Date:</b>
<b>Specification Committee Approved Text:</b>			
<b>Comments:</b>			
<b>Specification Section Recommended Text:</b>			
2116.02, A, 1, b.			

**Replace the Article:**

Foamed Asphalt using PG 52 -34S or ~~PG 46-34~~ asphalt binder meeting requirements of Section 4137.

**2122.02, A, Hot Mix Asphalt Mixture (1,000,000 ESAL Base Mixture).**

**Replace the title and Article:**

**A. Asphalt Mixture.**

Use a ~~1,000,000 ESAL~~ Standard Traffic (ST) base mixture with PG 58-28S binder according to Section 2303.

**2213.02, A, 1, Asphalt Base Widening.**

**Replace the Article:**

Use 1/2 inch or 3/4 inch ~~1,000,000 ESAL~~ Standard Traffic (ST) Base mixture. For base widening for shoulders, use PG 58-28S binder.

**2303.02, B, 1, b, 1, Friction Classification L-2.**

**Replace Articles c and d:**

- c) For Interstates and all mixtures designed for ~~30,000,000 ESALS and higher~~ Very High Traffic (VT), the fineness modulus of the combined Type 2 aggregate is at least 1.0. Calculations for fineness modulus are shown in Materials I.M. 501.
- d) On Interstates and all mixtures designed for ~~30,000,000 ESALS and higher~~ Very High Traffic (VT), if 40% or more of the total aggregate is a limestone as defined in Materials I.M. T203, at least 30% of the combined aggregate retained on the No. 4 sieve is Type 2 or better friction aggregate

**2303.02, D, 6.**

**Replace the Article:**

For base widening refer to Section 2213. When an adjoining surface is designed for ~~300,000 ESALS or less~~ Standard Traffic (ST) and is paved during the same project, use a base mixture at same ~~ESAL level~~ traffic designation used in surface mixture.

**2303.02, E, 2, a, 1.**

**Replace the Article:**

Mixtures for Interstate and Primary highways designed for ~~30,000,000 ESALS and higher~~ Very High Traffic (VT), and

**2303.02, E, 2, d.**

**Replace the Article:**

Use the following minimum stripping inflection point (SIP) requirements for plant produced material based on traffic designation:

PG High	SIP, Number of Passes	
Temperature, °C	1	2
	< 3,000,000 ESALS	≥ 3,000,000 ESALS
58	10,000	14,000
64	10,000	14,000
70	10,000	14,000

**Table 2303.02-1: Minimum Stripping Inflection Point**

Traffic Designation	SIP, Number of Passes <sup>1, 2</sup>
S	10,000
H, V	14,000

Note 1: If ratio between creep slope and stripping slope as defined in Materials IM 319 is less than 2.00, the SIP is invalid.

Note 2: Minimum SIP for mixtures placed as base widening is 5000 passes.

When notified of non-compliant results, the Engineer may suspend paving operations until an approved "significant mix change" is implemented.

### 2303.03, C, 2, b, 2

**Replace** the second bullet:

- Milled HMA/CIR Surface: 0.05 to 0.07 gallon per square yard

### 2304.02, B, HMA Option.

**Replace** the Article:

Design a mixture per Materials I.M. 510 for the following:

1. For detour pavements or median crossovers on interstates and multi-lane primary highways, use a ~~40,000,000 ESAL~~ High Traffic (HT) surface or intermediate mixture, with PG 64-22S asphalt binder. The surface lift requires L-4 friction aggregate.
2. For detour pavements on all other primary highways, use a ~~3,000,000 ESAL~~ High Traffic (HT) surface or intermediate mixture with a PG 64-22S asphalt binder.
3. For detour pavements on non-primary projects use a ~~1,000,000 ESAL~~ Standard Traffic (ST) surface or intermediate mixture with a PG 64-22S asphalt binder.

### 2310.02, B, Hot Mix Asphalt Stress Relief Course.

**Replace** Articles 1 and 2:

2. Use PG 58-28S asphalt binder.
3. Use a mixture meeting the following:
  - a. ~~300,000 ESAL~~ Standard Traffic (ST), 3/8 inch HMA mix requirements.
  - b. Target air voids of 3.0%.
  - c. No maximum film thickness restriction and no minimum filler/bitumen ratio restriction.
  - d. Type B Aggregate (or better) with no percent crushed particle requirements and gradation falling below the restricted zone.

### 2318.02, A, 2.

**Replace** the first two sentences;

Foamed Asphalt using PG 52-34S or ~~PG 46-34~~ asphalt binder meeting the requirements of Section 4137 may be used on Interstate, Primary, Secondary, and local projects. For projects using PG 52-34S as the cold in-place stabilizing agent, meet the following requirements:

### 2511.02, B, Hot Mix Asphalt.

**Replace** the Article:

1. For sidewalks and recreational trails not adjacent to pavement, use ~~100,000 ESAL~~ Standard Traffic (ST), 3/8 inch HMA, according to Section 2303.
2. When the recreational trail or sidewalk is adjacent to the pavement and also functions as

the pavement shoulder, use ~~1,000,000 ESAL~~ Standard Traffic (ST), 1/2 inch base mixture.

3. Use PG 58-28S or ~~PG 52-34~~ Performance Grade binder as specified in the plans.

**2517.02, B, HMA Paving Projects.**

**Replace** the Article:

Use an High Traffic (HT) HMA surface mixture ~~that is one mix level above the approaching surface course~~. Use asphalt binder meeting or exceeding PG 64-22S.

**2529.02, A, Hot Mix Asphalt Mixture.**

**Replace** the Article:

Unless stated elsewhere in the contract documents, use HMA meeting or exceeding Section 2303 requirements for a ~~300,000 ESAL~~ Standard Traffic (ST) surface mixture. Use an asphalt binder meeting or exceeding PG 64-22S.

**2530.02, A, Hot Mix Asphalt Patching Material.**

**Replace** the Article:

Unless stated elsewhere in the contract documents, use HMA meeting or exceeding Section 2303 requirements for a ~~300,000 ESAL~~ Standard Traffic (ST) 3/8 or 1/2 inch surface mixture. Use an asphalt binder that meets or exceeds PG 64-22S.

**2540.02, Materials.**

**Replace** the Article:

- A. Use the following materials for filling the longitudinal joint in the PCC base:
  1. For a 0 to 3/4 inch opening, fill the existing joint with either PG 58-xxS or CRS-2 emulsion.
  2. For an opening greater than 3/4 inch, fill the existing joint with a 3/8 inch to 1/2 inch commercial HMA mixture with PG 58-xxS or other suitable hot or cold bituminous mixture approved by the Engineer.
- B. For completing the joint repair (filling the milled trench above the PCC base), use a ~~300,000 ESAL~~ Standard Traffic (ST) HMA or similar mixture approved by the Engineer.

**2543.02, A.**

**Replace** the Article:

Unless stated elsewhere in the contract documents, use HMA meeting or exceeding Section 2303 requirements for a ~~300,000 ESAL~~ Standard Traffic (ST) surface mixture.

**4137, Asphalt Binder.**

**Replace** the Section:

- A. Meet the requirements for the type and grade specified in the contract documents and comply with the Combined States Binder Group.
- B. Determine performance grade according to AASHTO R29.
- C. ~~Do not add acids to modify asphalt binders.~~ Polyphosphoric Acid may be used as a co-modifier up to 0.4% by weight of binder. The Engineer may verify with laboratory testing.



- D. For asphalt binder grades with a temperature spread of 92° or greater<sup>1</sup>, meet the requirements of the Combined State Binder Group as follows: Except for Standard Traffic grades, meet CSBG requirements for Minimum Percent Recovery when tested per AASHTO T350 at the high temperature identified by the PG grade.

**Table 4137.01-1: PG+ Requirements**

AASHTO R 29 Grade	AASHTO T 350 Minimum Percent Recovery (R <sub>3.2</sub> ) <sup>2</sup>		DSR Phase Angle; degrees (original binder)
	Test Temperature <sup>2</sup>		
	58°C	64°C	
58-34P	30	25	77
64-28P	30	25	77
64-34P	55	45	75
70-22P	55	45	77
70-28P	55	45	75
70-34P	75	75	73
76-28P	75	75	73
76-34P	75	75	73
82-22P	75	75	73

1 — Temperature spread is determined by subtracting low temperature from high temperature; for example PG 64-28: 64 - (28) = 92.

2 — See Figure 4137.01-01 for test temperatures.

**Figure 4137.01-01: AASHTO T 350 Test Temperature by County (°C)**

(Delete figure)

**Comments:**

**Member's Requested Change:** (Do not use 'Track Changes', or 'Mark-Up'. Use **Strikeout** and **Highlight**.)

2116.02 Materials.

A. Asphalt Stabilizing Agent.

1. Unless specified otherwise in the contract documents, the asphalt stabilizing agent may, at the Contractor's option, be either of the following:
  - a. Emulsified Asphalt (HFMS-2s) meeting the requirements of Section 4140.
  - b. Foamed Asphalt using **PG 52-34S or PG 46-34** asphalt binder meeting the requirements of Section 4137.

2122.02 Materials.

- A. Hot Mix Asphalt Mixture (**Standard Traffic (ST) 1,000,000 ESAL** Base Mixture).  
Use materials specified in **a Standard Traffic (ST) 1,000,000 ESAL** base mixture with PG 58-28**S** binder according to Section 2303.

2213.02 Materials.

Use materials meeting the following requirements:

A. Base Material.

1. HMA Asphalt Base Widening.  
Use 1/2 inch or 3/4 inch **Standard Traffic (ST) 1,000,000 ESAL** Base mixture. For base widening for shoulders, use PG 58-28**S** binder.
  - a. Use mixture specified on the contract documents.
  - b. Meet requirements of Section 2303, as specified.

**2303.02, B. Aggregates.**

1. Individual Aggregates.
  - a. Use virgin mineral aggregate as specified in Section 4127.
  - b. When specified, furnish friction aggregate from sources identified in Materials I.M. T203.
    - 1) Friction Classification L-2.

Use a combined aggregate such that:

  - a) At least 80% of the combined aggregate retained on the No. 4 sieve is Type 4 or better friction aggregate, and
  - b) At least 25% of the combined aggregate retained on the No. 4 sieve is Type 2 or better friction aggregate, and
  - c) For Interstates and all mixtures designed for **Very High Traffic (VT) 30,000,000 ESALS and higher**, the fineness modulus of the combined Type 2 aggregate is at least 1.0. Calculations for fineness modulus are shown in Materials I.M. 501.
  - d) On Interstates and all mixtures designed for **Very High Traffic (VT) 30,000,000 ESALS and higher**, if 40% or more of the total aggregate is a limestone as defined in Materials I.M. T203, at least 30% of the combined aggregate retained on the No. 4 sieve is Type 2 or better friction aggregate

**2303.02, D, 6.**

For base widening refer to Section 2213. When an adjoining surface is designed for **Standard Traffic (ST) 300,000 ESALS or less** and is paved during the same project, use a base mixture at same **traffic designation ESAL level** used in surface mixture.

**2303.02, E, 2.**

- a. Perform a moisture sensitivity evaluation of the proposed asphalt mixture design in accordance with Materials I.M. 319 for the following mixtures when placed in travelled lanes:
  - 1) Mixtures for Interstate and Primary highways designed for **Very High Traffic (HT) 30,000,000 ESALS and higher**
- d. Use the following minimum stripping inflection point (SIP) requirements for plant produced material **based on traffic designation**:

Traffic Designation	SIP, Number of Passes <sup>1,2</sup>
S	10,000
H, V	14,000

PG High	SIP, Number of Passes <sup>1, 2</sup>	
Temperature, °C		
	< 3,000,000 ESALS	≥ 3,000,000 ESALS
58	10,000	14,000
64	10,000	14,000
70	10,000	14,000

Note 1: If ratio between creep slope and stripping slope as defined in Materials I.M 319 is less than 2.00, the SIP is invalid.

Note 2: Minimum SIP for mixtures placed as base widening is 5000 passes.

**C. HMA Construction.**

- b. Tack Coats.
  - 1) Apply tack coats when the entire surface area on which the coat is to be applied is free of moisture. Do not apply them when the temperature on the surface being covered is less than 25°F.

2) Place a tack coat to form a continuous, uniform film on the area to be covered. Unless directed otherwise, spread tack coat at the following undiluted rates:

- New HMA Surface 0.03 to 0.05 gallon per square yard
- Milled HMA/CIR Surface 0.05 to 0.07 gallon per square yard
- PCC/Existing HMA Surface 0.04 to 0.06 gallon per square yard

Tack coat may be diluted with water up to 1:1 to improve application.

2304.02, Materials.

**B. HMA Option.**

Design a mixture per Materials I.M. 510 for the following:

1. For detour pavements or median crossovers on interstates and primary highways, use a **High Traffic (HT) 10,000,000 ESAL** surface or intermediate mixture, with **PG 64-22S** asphalt binder. The surface lift requires L-4 friction aggregate.

2. For detour pavements on non-primary projects use a **Standard Traffic (ST) 1,000,000 ESAL** surface or intermediate mixture with a **PG 64-22S** asphalt binder.

2310.02, Materials.

**B. Hot Mix Asphalt Stress Relief Course.**

1. Use an HMA stress relief course for unbonded overlays consisting of a nominal 1 inch (25 mm) course of HMA meeting the requirements of Section 2303.

2. Use PG 58-28**S** asphalt binder.

3. Use a mixture meeting the following:

- a. **Standard Traffic (ST) 300,000 ESAL**, 3/8 inch (9.5 mm) HMA mix requirements.
- b. Target air voids of 3.0%.
- c. No maximum film thickness restriction and no minimum filler/bitumen ratio restriction.
- d. Type B Aggregate **(or better)** with no percent crushed particle requirements and gradation falling below the restricted zone.

2318.02, A, Asphalt Stabilizing Agent

2. Foamed Asphalt using PG 52-34**S** or **PG 46-34** asphalt binder meeting the requirements of Section 4137 may be used on Interstate, Primary, Secondary, and local projects. For projects using PG 52-34**S** as the cold in-place stabilizing agent, meet the following requirements:

- Minimum  $G^*/\sin\delta$  of 0.70 kPa for the original asphalt binder,
- Minimum  $G^*/\sin\delta$  of 1.5 kPa for RTFO aged binder, or
- Maximum  $G^*\sin\delta$  of 5000 kPa for PAV aged binder.

2517.02, Materials.

**B. HMA Paving Projects.**

Use a **High Traffic (HT) an HMA surface mixture that is one mix level above the approaching surface course**. Use asphalt binder meeting or exceeding **PG 64-22S**.

2529.02 materials.

**A. Hot Mix Asphalt Mixture.**

Unless stated elsewhere in the contract documents, use HMA meeting or exceeding Section 2303

requirements for a Standard Traffic (ST) 300,000 ESAL surface mixture. Use an asphalt binder meeting or exceeding PG 64-22S.

#### 2530.02 MATERIALS.

Meet the requirements for the type of material specified.

##### A. Hot Mix Asphalt Patching Material.

Unless stated elsewhere in the contract documents, use HMA meeting or exceeding Section 2303 requirements for a Standard Traffic (ST) 300,000 ESAL 3/8 or 1/2 inch surface mixture. Use an asphalt binder that meets or exceeds PG 64-22S.

2540.02 materials.

A. Use the following materials for filling the longitudinal joint in the PCC base:

1. For a 0 to 3/4 inch (0 mm to 20 mm) opening, fill the existing joint with either PG 58-xxS or CRS-2 emulsion.
2. For an opening greater than 3/4 inch (20 mm), fill the existing joint with a 3/8 inch to 1/2 inch (9.5 mm to 12.5 mm) commercial HMA mixture with PG 58-xxS or other suitable hot or cold bituminous mixture approved by the Engineer.

B. For completing the joint repair (filling the milled trench above the PCC base), use a Standard Traffic (ST) 300,000 ESAL HMA or similar mixture approved by the Engineer.

2543.02 materials.

- A. Unless stated elsewhere in the contract documents, use HMA meeting or exceeding Section 2303 requirements for a Standard Traffic (ST) 300,000 ESAL surface mixture.

#### 4137.01 GENERAL REQUIREMENTS.

- A. Meet the requirements for the type and grade specified in the contract documents and comply with the Combined States Binder Group.
- B. Determine performance grade according to AASHTO R29..
- C. Polyphosphoric Acid may be used as a co-modifier up to 0.4% by weight of binder. The Engineer may verify with laboratory testing.. Do not add acids to modify asphalt binders.
- D. Except for Standard Traffic grades, meet CSBG requirements for Minimum Percent Recovery when tested per AASHTO T350 at the high temperature identified by the PG grade. For asphalt binder grades with a temperature spread of 92° or greater<sup>1</sup>, meet the requirements of the Combined State Binder Group as follows:

Table 4137.01-1: PG+ Requirements

AASHTO R 29 Grade	AASHTO T 350		DSR Phase Angle; degrees (original binder)
	Minimum Percent Recovery (R <sub>3.2</sub> )		
	Test Temperature <sup>2</sup>		
	58°C	64°C	
58-34P	30	25	77
64-28P	30	25	77
64-34P	55	45	75
70-22P	55	45	77
70-28P	55	45	75

<del>70-34P</del>	<del>75</del>	<del>75</del>	<del>73</del>
<del>76-28P</del>	<del>75</del>	<del>75</del>	<del>73</del>
<del>76-34P</del>	<del>75</del>	<del>75</del>	<del>73</del>
<del>82-22P</del>	<del>75</del>	<del>75</del>	<del>73</del>
<del>3— Temperature spread is determined by subtracting low temperature from high temperature; for example PG 64-28: <math>64 - (-28) = 92</math>.</del>			
<del>4— See Figure 4137.01-01 for test temperatures.</del>			

**~~Figure 4137.01-01: AASHTO T 350 Test Temperature by County (°C)~~**

<b>Reason for Changes:</b> Adopt AASHTO M332. New bid items will reflect the changes.		
<b>New Bid Item Required (X one)</b>	<b>Yes X</b>	<b>No</b>
<b>Bid Item Modification Required (X one)</b>	<b>Yes</b>	<b>No X</b>
<b>Bid Item Obsolescence Required (X one)</b>	<b>Yes</b>	<b>No X</b>
<b>Comments:</b> To simplify the specification, 7 gyratory levels will be consolidated into 3. New bid items will reflect the changes.		
<b>County or City Comments:</b>		
<b>Industry Comments:</b> Industry in support		

Form 510130 (08-15)



**SPECIFICATION REVISION SUBMITTAL FORM**

<b>Submitted by:</b> Greg Mulder		<b>Office:</b> Construction and Materials	<b>Item 9</b>
<b>Submittal Date:</b> 3/1/2016		<b>Proposed Effective Date:</b> October 2016	
<b>Article No.:</b> <b>Title:</b>		<b>Other:</b> DS-15024, Developmental Specifications for Hot Mix Asphalt Interlayer	
<b>Specification Committee Action:</b>			
<b>Deferred:</b>	<b>Not Approved:</b>	<b>Approved Date:</b>	<b>Effective Date:</b>
<b>Specification Committee Approved Text:</b>			
<b>Comments:</b>			
<b>Specification Section Recommended Text:</b> See attached Draft Supplemental Specifications for Hot Mix Asphalt Interlayer.			
<b>Comments:</b> Why are we making this an SS?			
<b>Member's Requested Change:</b> (Do not use 'Track Changes', or 'Mark-Up'. Use <del>Strikeout</del> and Highlight.) <b>A. Asphalt Binder.</b> Use a <b>PG 58-34E</b> <del>PG 64-34</del> .  <b>MOVE OUT OF A DS AND INTO AN SS</b>			
<b>Reason for Revision:</b> Adopt the new binder designation			
<b>New Bid Item Required (X one)</b>	<b>Yes</b>	<b>No</b>	<b>x</b>
<b>Bid Item Modification Required (X one)</b>	<b>Yes</b>	<b>No</b>	<b>X</b>
<b>Bid Item Obsolescence Required (X one)</b>	<b>Yes</b>	<b>No</b>	<b>x</b>
<b>Comments:</b>			
<b>County or City Comments:</b>			
<b>Industry Comments:</b> Industry in support			

**Draft SS-15XXX**  
(Replaces DS-15024)



**SUPPLEMENTAL SPECIFICATIONS  
FOR  
HOT MIX ASPHALT INTERLAYER**

**Effective Date  
October 18, 2016**

**THE STANDARD SPECIFICATIONS, SERIES 2015, ARE AMENDED BY THE FOLLOWING MODIFICATIONS AND ADDITIONS. THESE ARE SUPPLEMENTAL SPECIFICATIONS AND THEY PREVAIL OVER THOSE PUBLISHED IN THE STANDARD SPECIFICATIONS.**

**15XXX.01 DESCRIPTION.**

These specifications describe requirements for a highly polymer modified asphalt interlayer. Apply Section 2303 of the Standard Specifications unless otherwise directed in these specifications.

**15XXX.02 MATERIALS.**

**A. Asphalt Binder.**

Use a PG ~~64-34~~ 58-34E.

**B. Mix Design.**

1. See Materials I.M. 510 Appendix A.
2. Mix approval is based on Performance Testing Requirements per Table 4 in Materials I.M. 510 Appendix A.
3. Do not use RAP.

**15XXX.03 CONSTRUCTION.**

- A. Tack the cleaned surface prior to placement of the interlayer using a trackless product approved on AASHTO's Product Evaluation Listing (APEL). Apply a second tack coat prior to placement of the next lift. Subsequent lifts that are at least 1 1/2 inches in thickness may use any approved tack outlined in Article 2303.02, E, 1.
- B. Compact with steel wheeled roller.
- C. Do not pave unless ambient temperatures are at least 60°F and rising.
- D. Do not open to traffic until the entire mat has cooled below 150°F.
- E. **Quality Assurance/Quality Control.**

**1. Field Voids Acceptance.**

Acceptance for field voids shall be Class II compaction defined in Section 2303 of the Standard Specifications.

**2. Lab Voids Acceptance.**

Sample and test one hot box per day of production unless otherwise approved by the Engineer. Apply Article 2303.05, A, 3, a, 2, of the Standard Specifications for AAD acceptance. Air void target is based on approved JMF.

**3. Take at least one cold feed for gradation control.**

**15XXX.04 METHOD OF MEASUREMENT.**

Hot Mix Asphalt Interlayer, of the size specified, will be measured according to Article 2303.04 of the Standard Specifications.

**15XXX.05 BASIS OF PAYMENT.**

Hot Mix Asphalt Interlayer, of the size specified, will be paid for according to Article 2303.05 of the Standard Specifications.



Form 510130 (08-15)



**SPECIFICATION REVISION SUBMITTAL FORM**

<b>Submitted by:</b> Greg Mulder		<b>Office:</b> Construction and Materials	<b>Item 10</b>
<b>Submittal Date:</b> 3/28/2016		<b>Proposed Effective Date:</b> October 2016	
<b>Article No.:</b> <b>Title:</b>		<b>Other:</b> DS-15037, Developmental Specifications for High Performance Thin Lift Overlay	
<b>Specification Committee Action:</b>			
<b>Deferred:</b>	<b>Not Approved:</b>	<b>Approved Date:</b>	<b>Effective Date:</b>
<b>Specification Committee Approved Text:</b>			
<b>Comments:</b>			
<b>Specification Section Recommended Text:</b> See attached Draft Developmental Specifications for High Performance Thin Lift Overlay.			
<b>Comments:</b>			
<b>Member's Requested Change:</b> (Do not use 'Track Changes', or 'Mark-Up'. Use <del>Strikeout</del> and Highlight.) <b>15025.02 MATERIALS.</b> <b>B. Asphalt Binder.</b> Use a PG 58-34E PG 76-34 with a minimum percent recovery of 90% when tested at 58°C 64°C per AASHTO T 350 at 3.2 kPa.  <b>15025.02, B MIX DESIGN</b> 1. Do not use more than 15.0% binder replacement. Do not use RAS.  <b>15025.03 CONSTRUCTION.</b>  <b>A.</b> Apply tack coat prior to placement of thin lift overlay using a trackless product from Appendix A of this DS or otherwise approved on AASHTO's Product Evaluation Listing (APEL).  <b>Appendix A – Approved Trackless Materials</b>			
<b>Product Name</b>		<b>Producer</b>	
TRACKLESS (NTSS-1HM)		Blacklidge Emulsions	
CAT-TAC (CNTT)		Hunt Refining Company	
FastTack		Colas Solutions	
eTac (CBC-LT)		Ergon Asphalt & Emulsions	
EM-50-TT		Seaboard/Specialty Emulsions	
Cationic Non-Tracking Tack Coat (CNTTC)		Hammaker East	
Emulvia Clean (NTCRS-1hM)		Eurovia (BCI Materials/Blythe Construction)	
FastSet Tack		Western Emulsion.	
<b>New Bid Item Required (X one)</b>			
<b>Yes</b>		<b>No x</b>	
<b>Bid Item Modification Required (X one)</b>			
<b>Yes</b>		<b>No X</b>	

<b>Bid Item Obsolescence Required (X one)</b>	<b>Yes</b>	<b>No</b> x
<b>Comments:</b>		
<b>County or City Comments:</b>		
<b>Industry Comments:</b> Industry in support		

**Draft DS-15XXX**  
(Replaces DS-15037)



**DEVELOPMENTAL SPECIFICATIONS  
FOR  
HIGH PERFORMANCE THIN LIFT OVERLAY**

**Effective Date  
October 18, 2016**

**THE STANDARD SPECIFICATIONS, SERIES 2015, ARE AMENDED BY THE FOLLOWING MODIFICATIONS AND ADDITIONS. THESE ARE DEVELOPMENTAL SPECIFICATIONS AND THEY PREVAIL OVER THOSE PUBLISHED IN THE STANDARD SPECIFICATIONS.**

**15XXX.01 DESCRIPTION.**

These specifications describe requirements for a highly polymer modified asphalt thin lift surface course. Apply Section 2303 of the Standard Specifications unless otherwise directed in these specifications.

**15XXX.02 MATERIALS.**

**A. Asphalt Binder.**

Use PG ~~76-34~~ 58-34E with a minimum percent recovery of 90% when tested at ~~64°C~~ 58°C per AASHTO T 350 at 3.2 kPa.

**B. Mix Design.**

1. Design Gyration 50  
Design Target (%Gmm) 3.0  
Film Thickness 8.0 – 13.0  
Aggregate Quality A  
Crushed Content (minimum) 50%  
FAA (minimum) 40  
Sand Equivalency (minimum) 50  
VMA (minimum) 16%
2. **Friction Aggregate.**  
Interstates: minimum 30% of Total Aggregate shall be Type 2 or better  
Non-Interstates: minimum 50% of Total Aggregate shall be Type 4 or better
3. **Hamburg Testing (AASHTO T324).**  
Compact to 3.5% air voids. No more than 8 mm rutting in the first 8000 passes.
4. Do not use more than 15.0% binder replacement. **Do not use RAS.**

**5. Gradation.**

Sieve Size	Min % Passing	Max % Passing
1½ inch		
1 inch		

3/8 inch	91	100
#4		90
#8	27	63
#16		
#30		
#50		
#100		
#200	2	10

#### 15XXX.03 CONSTRUCTION.

- A. Apply tack coat prior to placement of thin lift overlay using a trackless product from the following list or otherwise approved on AASHTO's Product Evaluation Listing (APEL).

Product Name	Producer
TRACKLESS (NTSS-1HM)	Blacklidge Emulsions
CAT-TAC (CNTT)	Hunt Refining Company
FastTack	Colas Solutions
eTac (CBC-LT)	Ergon Asphalt & Emulsions
EM-50-TT	Seaboard/Specialty Emulsions
Cationic Non-Tracking Tack Coat (CNTTC)	Hammaker East
Emulvia Clean (NTCRS-1hM)	Eurovia (BCI Materials/Blythe Construction)
FastSet Tack	Western Emulsion.

- B. Pave when ambient temperatures are at least 60°F and rising
- C. Compact with steel wheeled roller.
- D. Do not open to traffic until the entire mat has cooled below 150°F.

#### E. Quality Assurance/Quality Control.

- Field Voids Acceptance.**  
Acceptance for field voids shall be Class II compaction defined in Section 2303 of the Standard Specifications.
- Lab Voids Acceptance.**  
Sample from windrow or hopper. Apply Article 2303.05, A, 3, a, 2, of the Standard Specifications for AAD acceptance. Air void target is based on approved JMF.
- Take at least one cold feed for gradation control each day of production.

#### 15XXX.04 METHOD OF MEASUREMENT.

Hot Mix Asphalt Thin Lift Overlay will be measured according to Article 2303.04 of the Standard Specifications.

#### 15XXX.05 BASIS OF PAYMENT.

Hot Mix Asphalt Thin Lift Overlay will be paid for according to Article 2303.05 of the Standard Specifications.

Form 510130 (08-15)



**SPECIFICATION REVISION SUBMITTAL FORM**

<b>Submitted by:</b> Greg Mulder		<b>Office:</b> Construction and Materials	<b>Item 11</b>
<b>Submittal Date:</b> 4/4/2016		<b>Proposed Effective Date:</b> October 2016	
<b>Article No.:</b> 1107.06, B <b>Title:</b> Buy America (Federal Requirement)		<b>Other:</b>	
<b>Specification Committee Action:</b>			
<b>Deferred:</b>	<b>Not Approved:</b>	<b>Approved Date:</b>	<b>Effective Date:</b>
<b>Specification Committee Approved Text:</b>			
<b>Comments:</b>			
<p><b>Specification Section Recommended Text:</b>  <b>1107.06, B, Buy America.</b></p> <p><b>Replace the Article:</b></p> <p>On all contracts, per Materials I.M. 107, all products of iron, steel, or a coating of steel which are incorporated into the work shall be of domestic origin and shall be melted and manufactured in the United States. The Engineer may allow minimal amounts of these materials from foreign sources, provided the cost does not exceed 0.1% of the contract sum or \$2,500, whichever is greater. This amount shall include transportation, assembly, and testing as delivered cost of foreign products to the project. <del>Per Materials I.M. 107, Some</del> miscellaneous steel or iron components, subcomponents, and hardware, <del>as defined by FHWA,</del> will not be subject to Buy America requirements.</p> <p><b>Comments:</b> The new wording appears to indicate that Materials I.M. 107 defines which contracts Buy America applies to. Is this the case? I thought it applied to all contracts. Can we reword this to reflect whatever we are trying to convey with this revision?</p> <p>Is 'some' an adequate description of what miscellaneous items are not subject to Buy America?</p>			
<p><b>Member's Requested Change:</b> (Do not use 'Track Changes', or 'Mark-Up'. Use <del>Strikeout</del> and Highlight.)</p> <p><b>1107.06 FEDERAL REQUIREMENT.</b></p> <p><b>B. Buy America.</b></p> <p>On all contracts, <u>per Materials IM 107</u>, all products of iron, steel, or a coating of steel which are incorporated into the work shall be of domestic origin and shall be melted and manufactured in the United States. The Engineer may allow minimal amounts of these materials from foreign sources, provided the cost does not exceed 0.1% of the contract sum or \$2,500, whichever is greater. This amount shall include transportation, assembly, and testing as delivered cost of foreign products to the project. <u>Per Materials I.M. 107, Some</u> miscellaneous steel or iron components, subcomponents, and hardware, <u>as defined by FHWA,</u> will not be subject to Buy America requirements.</p>			
<b>Reason for Changes:</b> Addresses impacts from recent US District Court decision regarding Buy America.			
<b>New Bid Item Required (X one)</b>	<b>Yes</b>	<b>No</b> X	
<b>Bid Item Modification Required (X one)</b>	<b>Yes</b>	<b>No</b> X	

<b>Bid Item Obsolescence Required (X one)</b>	<b>Yes</b>	<b>No</b> x
<b>Comments:</b>		
<b>County or City Comments:</b>		
<b>Industry Comments:</b>		